## REMARKS

Claims 1-31 are pending in the present application. Claims 1-5, 7, 9-11, 13-16, 18, 20, 22, 23, 26, 28 and 31 have been amended herein.

### Statement of the Substance of the Interview

On January 28, 2003, Thomas E. Lees on behalf of the applicant conducted a telephone interview with the Examiner in the above matter. Claim 1 was discussed with reference to the art cited in the current Office Action. During the course of the interview, the Examiner reasserted that that she was entitled to ignore much of the language in claim 1 because she interpreted the language "adapted to" to be purely functional and not structurally limiting.

The applicant argued that, in view of the M.P.E.P. §2106 and M.P.E.P. §2173.05(g), the term "adapted to" is not *per se* functional and non-limiting. Rather, the Examiner must examine the claim in the context of the remainder of the language to determine whether the "adapted to" recitation merely suggests or makes optional without reciting structural attributes of interrelated components. The applicant pointed to several aspects of the claim language that illustrate structural attributes. Despite the applicant's arguments, the Examiner was un-persuaded and no agreement was reached. In the spirit of cooperation with the Examiner, the claims are amended herein to remove all "adapted to" language from claim 1. In removing the phrase "adapted to", the scope of the claims has not been narrowed.

The Examiner also indicated that the terms "working machine" and "working part of the tool" were confusing and requested that the claims be amended to more clearly distinguish the machine itself from the part of the tool where an absolute position measurement is required. The claims have been amended in response thereto. Again, the amendments in response thereto do not narrow the scope of the claims.

35 U.S.C. §103 in view of Diekhans

Claims 1, 3, 6, 14, 19, 28, 29 and 31 were rejected under 35 U.S.C. §103(a) as being unpatentable in view of U.S. Patent No. 6,073,070 issued June 06, 2000 to Diekhans, hereinafter "Diekhans". According to the MPEP §706.02(j) and §2143.03, in order to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. The applicant asserts that a *prima facie* case of obviousness has not been established for the above claims for reasons set forth below.

*Orientation Of The Designated Place On The Machine In A Fixed Coordinate System*

Claim 1 has been amended herein to recite a position-determining apparatus configured to provide data that corresponds to the orientation of a designated place on the machine in a fixed coordinate system. The applicant can find no teaching or suggestion anywhere in Diekhans for such a structure. The Examiner asserts that this limitation is taught in Diekhans citing Col. 3, lines 17-20 and Col. 6, lines 13-15, 53-56. The applicant respectfully traverses this interpretation of Diekhans.

Column 3, lines 17-20 of Diekhans describes using operational data stored in a historic data cadastre (terrain map) so that when a harvester visits a strip of a field that is mapped in the cadastre, the terrain map can be used to partially or completely control the positioning of the working part of a tool coupled to the harvester. The applicant fails to see how this has anything to do with the above limitation.

Column 6, lines 13-15 of Diekhans describes the use of a GPS antenna at each of two references points identified by reference points (b1, b2). However, the reference points (b1, b2) are directly on the working part of the tool itself (See Fig. 2, Col. 5, lines 62-64). The inclination angle (Wq) of reference point (b1) with respect to (b2) is then

computed using geometric conditions. The determination of the angle of inclination based upon two points directly on the working part of the tool is not what is claimed however.

Likewise, Column 6, lines 53-56 of Diekhans describes the inclination angle (w1) of the *ground surface*. An inclination angle of the ground surface is not what is being claimed however. Moreover, the inclination angle of the ground surface is derived from the inclination of a reference line (L1) and two subsequent measurements of ground distance (Col. 6, lines 53-56). The reference line (L1) is generated by measuring the absolute positions of points (Pb1) and (Pb2) of the second reference points (b1, b2) (Col. 6, lines 42-47). However as described above, points (b1, b2) are directly on the working part of the tool (See Fig. 2, Col. 5, lines 25-28). Also, the subsequent measurements of ground distance are measurements from the *working part* of the tool to the ground surface (See reference d1, in Fig. 2; Col. 5, lines 64-67 to Col. 6, lines 1-8). Again, this passage does not teach or suggest that which is claimed.

Diekhans teaches various inclination measurements that correspond to inclination with respect to the working part of the tool. However, that is not what is being claimed. "All words in a claim must be considered in judging the patentability of that claim against the prior art" *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970). Diekhans not teach or suggest a position-determining apparatus configured to provide data that corresponds to the orientation of a designated place on the machine in a fixed coordinate system. Accordingly, the applicant requests that the Examiner withdraw the rejection of claim 1 and the claims that depend therefrom under 35 U.S.C. §103.

*Calculating Device to Provide Position And/Or Orientation Of The Working Part*

Claim 1 has been amended herein to recite a calculating device configured to provide at least one of the position and the orientation of the working part of the tool in the fixed coordinate system based upon the position and orientation of the designated place

on the machine in a fixed coordinate system and the positional relationship of the working part of the tool relative to the designated place on the machine in the machine-based coordinate system. Again, the applicant can find no teaching or suggestion anywhere in Diekhans for such a structure. The Examiner asserts that this limitation is taught in Diekhans citing Col. 2, lines 60-67 and Col. 3, lines 1-10. The applicant respectfully traverses this interpretation of Diekhans.

Column 2, lines 60-67 and column 3, lines 1-10 in Diekhans does teach obtaining an absolute position of the working part of the tool. However, the passage does not teach or suggest that the position of the working part of the tool is derived from the orientation of the machine. The cited passage in Diekhans further fails to teach or suggest combining the absolute position of a designated place on the machine in a fixed coordinate system, the orientation of the designated place on the machine in the fixed coordinate system, and the relative position from the designated place on the machine to the working part of the tool in a machine based coordinate system. Accordingly, the applicant requests that the Examiner withdraw the rejection of claim 1 and the claims that depend therefrom under 35 U.S.C. §103.

*Additional Comments Concerning Diekhans*

In support of the rejection to claim 1, the Examiner references Fig. 7 without pointing to any passage in the specification of Diekhans in support thereof, to apparently assert that Diekhans teaches at least one detector equipment at a designated place on the machine spaced from the working part of the tool. A review of Fig. 7 actually shows two GPS antennas *directly attached* to a cutting bar of a treatment device (working part of the tool). However, this is not what is being claimed.

During the above described interview, the Examiner argued that she is allowed to interpret the claims broadly. Since Diekhans shows two GPS antennas on the working

part of the tool, and because the working part of the tool is connected to the machine, she concluded that the GPS antennas of Fig. 7 were on a designated place on the machine. During the interview, the applicant traversed this interpretation of the claim language, and continues to do so. According to the M.P.E.P. §2111, the Examiner is charged to interpret the claims broadly. However, the M.P.E.P. §2111 also makes clear that the broad interpretation must be "reasonable and consistent with the specification". Moreover, the broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. *M.P.E.P. §2111 citing In re Cortright*, 165 F.3d 1353, 1359 (Fed. Cir. 1999). Interpreting the claim as the Examiner is apparently doing is unreasonable and inconsistent with the interpretation that would be given by one of skill in the art. For example, claim 1 recites at least one position relationship device configured to determine a positional relationship of the working part of the tool relative to the designated place on the machine in a machine based coordinate system. This entire limitation is vitiated by the Examiner's above interpretation.

Claim 1 has been amended herein to clarify that the designated place on the machine is spaced *away* from the working part of the tool. While the addition of the word "away" may arguably add clarity to what is meant by the claim, the scope of the claim is not narrowed herein as the claim previously recited that the designated place is "spaced from" the working part of the tool. At any rate, Fig. 7 of Diekhans does not teach the above limitation.

The Examiner also argued in the Office Action that the language "adapted to" is not a positive limitation thus the Examiner apparently ignored much of the language in claim 1. While the applicant continues to disagree with such an interpretation of the claims, the claim has been amended to remove all reference thereto.

With reference to claim 3, Diekhans fails to teach or suggest two detector units placed at a designated place on the machine spaced away from the working part of the tool. In support of this rejection, the Examiner again provides no support in the specification of Diekhans, rather, the Examiner relies on a reference to Fig. 7. However, as described more fully above, Fig. 7 shows two GPS antennas directly on the working part of the tool, which neither teaches nor suggests that which is claimed.

With respect to method claim 14 as amended herein, Diekhans fails to teach or suggest measuring both a position and orientation of a designated place on a machine spaced away from the working part of a tool in a fixed coordinate system. The arguments set out above with reference to claim 1 apply equally as well to the analysis of claim 14. As with claim 1, claim 14 has been amended herein to clarify that the designated place on the machine is spaced *away* from the working part of the tool. While the addition of the word "away" may arguably add clarity to what is meant by the claim, the scope of the claim is not narrowed herein as the claim previously recited that the designated place is "spaced from" the working part of the tool. At any rate, Fig. 7 of Diekhans neither teaches nor suggests the above limitation.

Moreover, Diekhans fails to teach calculating in the fixed coordinate system, at least one of an instantaneous position of the working part of the tool and an instantaneous orientation of the working part of the tool based upon the measured position and orientation of the designated place on the machine and the positional relationship of the working part of the tool relative to the designated place on the machine. Again, arguments provided with reference to claim 1 above apply to the analysis of this limitation as well.

With reference to claim 31 as amended herein, Diekhans does not teach or suggest providing at least one movable detector unit movable between positions with determinable positions in relation to the designated place on the working machine. In making the

rejection, the Examiner merely cites to Figs. 1, 6 and 7 of Diekhans. Fig. 6 is a block diagram of a computation device and has nothing to do with a moveable detector unit. Figs. 1 and 7 illustrate detectors, however, they appear to be fixedly positioned and not capable of movement. It would not make sense to move the detectors illustrated because the illustrated detectors are GPS antennas. Moving the GPS antennas relative to the machine would make position determining difficult.

Rejection Under 35 U.S.C. §103 Diekhans in view of Ford

Claims 2, 4, 7, 15, 27 and 30 were rejected under 35 U.S.C. §103 as being unpatentable over Diekhans in view of U.S. Patent No. 6,211,821 issued April 03, 2001 to Ford, hereinafter "Ford". Claims 2, 4, 7 and 27 depend from claim 1. Claims 15, 27 and 30 depend from claim 14. As described more fully above, Diekhans fails to establish *prima facie* obviousness for either claims 1 or 14.

Ford teaches a navigational apparatus that uses satellite signals to compute corrected positions. The section of Ford cited by the Examiner in the above rejection however, is the background section wherein it is stated that redundant north seeking gyroscopes have been used to determine the azimuth of a ship or aircraft.

Ford does not teach or suggest all of the limitations of claims 1 and 14 from which the above-rejected claims depend, including for example, those limitations discussed above with respect to Diekhans. The Examiner relies on the background of a reference instead of a teaching in the reference itself. In the context of the present rejection, the generalized statements provided by the background of Ford and the lack of explanation by the Examiner in the Office Action provides neither the motivation to combine nor an establishment of the likelihood of success as required by the M.P.E.P. §706.02(a). Moreover, the applicant does not understand this rejection. Claims 4 and 7

do not recite a north-seeking target unit. Accordingly, the applicant requests that the Examiner withdraw the above rejections under 35 U.S.C. §103.

Rejection Under 35 U.S.C. §103 Diekhans in view of Johnson

Claims 5, 8, 18 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Diekhans in view of U.S. Patent No. 5,606,444 issued February 25, 1997 to Johnson et al. hereinafter "Johnson". Claims 5 and 8 depend from claim 1. Claims 18 and 20 depend from claim 14. As described more fully above, Diekhans fails to establish *prima facie* obviousness for either claims 1 or 14.

Johnson teaches automatic alignment of optical data transceivers with respect to a likely moving computer in an aircraft and a stationary computer at a ground location. Johnson states in the background that "...free space optical communications systems often have a narrow field of view and, as such, require additional control systems to align the optical transceivers to ensure proper data transmission" (Col. 2, lines 9-12). The system in Johnson is "passive" such that no special equipment is needed to align the optical transceivers (Column 7, lines 36-41).

Johnson does not teach or suggest all of the limitations of claims 1 and 14 from which the above-rejected claims depend, including for example, those limitations discussed above with respect to Diekhans. Further, Johnson even when combined with Diekhans still fails to teach or suggest all of the limitations of the above-rejected claims. The Examiner again relies on the background of a reference instead of a teaching in the reference itself. In the context of the present rejection, the generalized statements provided by the background of Johnson and the lack of explanation by the Examiner in the Office Action provides neither the motivation to combine nor an establishment of the likelihood of success as required by the M.P.E.P. §706.02(a). Additionally, even if the

Examiner could use this teaching, which the applicant asserts is wholly improper, the references still fail to teach or suggest all of the claimed limitations.

With respect to claim 18, Diekhans combined with Johnson fails to teach or suggest rotatably mounting at least one controllable optical unit on the working machine, indicating the orientation of the optical unit in relation to the working machine and calculating the orientation of the working machine in the fixed coordinate system. Accordingly, the applicant requests that the Examiner withdraw the rejection to claims 5, 8, 18 and 20 under 35 U.S.C. §103(a).

Rejection Under 35 U.S.C. §103 Diekhans in view of Schupfner

Claims 9 and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Diekhans in view of U.S. Patent No. 6,374,190 issued April 16, 2002 to Schupfner hereinafter "Schupfner". Claim 9 depends from claim 1. Claim 22 depends from claim 14. As described more fully above, Diekhans fails to establish *prima facie* obviousness for either claims 1 or 14.

The Examiner cites Column 1, lines 17-25 in support of the rejection to claims 9 and 22. The applicant respectfully traverses this rejection. The passage in Schupfner cited by the Examiner deals with variations in inexpensive gyroscopes used in navigation systems due to temperature dependence. Further, Schupfner teaches a method of calibrating an angle sensor influenced by operating temperature. Schupfner has nothing whatsoever to do with that which is claimed in claims 9 and 22, that is, providing a map with stored topology of an area to be treated and presenting data for the working part relative to the map on a presentation unit.

Moreover, Schupfner does not teach or suggest all of the limitations of claims 1 and 14 from which the above-rejected claims depend, including for example, those limitations

discussed above with respect to Diekhans. Accordingly, the applicant requests the Examiner withdraw the rejection to claims 9 and 22 under 35 U.S.C. §103(a).

Rejection Under 35 U.S.C. §103 Diekhans in view of Johnson and Ford

Claim 21 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Diekhans in view of Johnson, and further in view of Ford. Claim 21 depends from claim 14. As described more fully above, Diekhans combined with Johnson fails to establish *prima facie* obviousness for claim 14.

The Examiner argues that Ford teaches a north-seeking target unit thus rendering claim 21 obvious. The applicant does not understand this rejection. Claim 21 does not recite a north seeking target. Further, as pointed out above, Diekhans combined with Ford and Johnson still fail to teach or suggest all of the limitations to claim 14 from which claim 21 depends. Accordingly, the applicant requests that the Examiner withdraw the rejection to claim 21 under 35 U.S.C. §103(a).

Rejection Under 35 U.S.C. §103 Diekhans in view of Ethridge

Claims 10 and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Diekhans in view of U.S. Patent No. 5,798,733 issued August 25, 1998 to Ethridge, hereinafter "Ethridge". Claim 10 depends from claim 1. Claim 23 depends from claim 14. As described more fully above, Diekhans fails to establish *prima facie* obviousness for either claims 1 or 14.

The Examiner cites Column 2, lines 17-23 in support of this rejection. This passage of Ethridge has nothing at all do with the claimed invention. Specifically, Ethridge combined with Diekhans fails to teach or suggest both a relatively slow determining device and a relatively fast determining device that reacts on at least one of position and orientation differences. Ethridge teaches a location guidance system for parachute

jumpers. Basically, future positions of parachute jumpers is predicted based upon current position information and some pre-stored information that contains data with respect to the target position and profile of the projected jumper landing site. At periodic update intervals, the predicted destination position is updated (Column 5, lines 10-25).

Moreover, Ethridge does not teach or suggest all of the limitations of claims 1 and 14 from which the above-rejected claims depend, including for example, those limitations discussed above with respect to Diekhans. Accordingly, the applicant requests that the Examiner withdraw the rejection to claims 10 and 23 under 35 U.S.C. §103(a).

Rejection Under 35 U.S.C. §103 Diekhans in view of Ethridge and Vanderwerf

Claims 11 and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Diekhans in view of Ethridge and further in view of U.S. Patent No. 5,774,832 issued August 25, 1998 to Vanderwerf, hereinafter "Vanderwerf". Claim 11 depends from claim 1. Claim 24 depends from claim 14. As described more fully above, Diekhans combined with Ethridge fails to establish *prima facie* obviousness for either claims 1 or 14.

Vanderwerf does not teach or suggest all of the limitations of claims 1 and 14 from which the above-rejected claims depend, including for example, those limitations discussed above with respect to Diekhans. Accordingly, the applicant requests that the Examiner withdraw the rejection to claims 11 and 24 under 35 U.S.C. §103(a).

Rejection Under 35 U.S.C. §103 Diekhans in view of Ethridge and Yamada

Claims 12 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Diekhans in view of Ethridge and further in view of U.S. Patent No. 5,974,675 issued November 02, 1999 to Yamada et al., hereinafter "Yamada". Claim 12 depends from claim 1. Claim 25 depends from claim 14. As described more fully above, Diekhans combined with Ethridge fails to establish *prima facie* obviousness for either claims 1 or 14.

Yamada does not teach or suggest all of the limitations of claims 1 and 14 from which the above-rejected claims depend, including for example, those limitations discussed above with respect to Diekhans. Accordingly, the applicant requests that the Examiner withdraw the rejection to claims 12 and 25 under 35 U.S.C. §103(a).

## CONCLUSION

For all of the above reasons, the applicant respectfully submits that claims 1-31 represent allowable subject matter. The Examiner is encouraged to contact the undersigned to resolve efficiently any formal matters or to discuss any aspects of the application or of this response. Otherwise, early notification of allowable subject matter is respectfully solicited.

Respectfully submitted,
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# VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

1. (Twice Amended) A system for determining the position of a working part of a tool on a ~~working~~ machine comprising:

a position-determining apparatus comprising~~:~~

~~at least one detector equipment placed generally at a designated place on the working machine spaced away from the working part of the tool, the position-determining apparatus configured to provide data that corresponds to and adapted to enable the determination of the position and orientation of the designated place on the machine of the designated place in a fixed coordinate system; and~~

~~an inclination- and orientation-measuring device adapted to enable the determination of the orientation of the designated place on the working machine in the fixed coordinate system,~~

at least one position relationship device configured to determine a ~~adapted to enable the determination of a~~ positional relationship of the working part of the tool relative to the designated place on the ~~working~~ machine in a machine-based coordinate system;

a calculating device operatively configured ~~adapted receive measurements from the position-determining apparatus in the fixed coordinate system and measurements from the at least one position relationship device in the machine-based coordinate system~~ to provide at least one of the position ~~of the working part of the tool~~ and the orientation of the working part of the tool in the fixed coordinate system ~~and the orientation of the working part of the tool in the fixed coordinate system.~~ based upon the position and orientation of the designated place on the machine in a fixed coordinate system and the positional relationship of the working part of the tool relative to the designated place on the machine in the machine-based coordinate system.

2. (Twice Amended) The system according to claim 1, wherein:

the at least one detector equipment comprises at least one detector unit fixedly placed on the ~~working~~ machine; and

the position- determining apparatus further comprises ~~the~~an inclination- and orientation-measuring device ~~comprises~~including a north-seeking unit adapted to instantaneously sense the direction of the ~~working~~ machine in relation to north.

3. (Twice Amended) The system according to claim 1 wherein:

the position-determining apparatus further comprises a stationary measuring station placed in the vicinity of the ~~working~~ machine, the stationary measuring station operatively configured to determine the position of the ~~working~~ machine in cooperation with the detector equipment; and

the at least one detector equipment comprises at least two detector units placed at the designated place on the ~~working~~ machine arranged in fixed positions relative to the ~~working~~ machine, ~~said~~ the at least two detectors arranged to cooperate with the stationary measuring station to give the orientation in space for the designated place on the ~~working~~ machine.

4. (Twice Amended) The system according to claim 28, characterized in that the at least one moveable detector unit is rotatable around an axis ~~placed at a distance therefrom~~, ~~said device~~the detector unit further configured such that measurement towards the detector unit is indicated when the detector unit reaches determined angular positions around the axis in relation to the ~~working~~ machine.

5. (Twice Amended) The system according to claim 1, characterized by at least one rotatably mounted and controllable optical unit placed on the ~~working~~ machine adapted to align towards a stationary measuring station such that the orientation of the optical unit relative to the ~~working~~ machine is indicated and transmitted to the calculating device for determination of the orientation of the ~~working~~ machine in the fixed coordinate system.

7. (Three Times Amended) The system according to claim 1, characterized in that the position- determining apparatus comprises a geodesic instrument with target-seeking function placed at a distance from the ~~working~~ machine and measuring against at least one target on the ~~working~~ machine.

9. (Three Times Amended) The system according to claim 1, characterized in that the calculating device comprises:

a stored map with a desired topography of an area which is to be treated;

calculated data for the working part of the tool configured to provide position and angular positions relative to the map; and

a presentation unit configured to present the map and calculated data.

10. (Three Times Amended) The system according to claim 1, characterized in that the position-determining apparatus comprises a relatively slow, accurate determining device which at time intervals accurately measures the actual position and orientation of the ~~working~~ machine, and a relatively fast determining device which reacts on at least one of position and orientation differences to at least one earlier determination in order to calculate and update the determination between the said time intervals.

11. (Twice Amended) The system according to claim 10, characterized in that the relatively fast determining device comprises at least one accelerometer device on the ~~working~~ machine adapted to measure the acceleration of the machine in at least one direction, and the calculating unit is further configured to integrate the indicated acceleration(s) and update the latest calculation result of the position of the working part of the tool in the fixed coordinate system.

13. (Three Times Amended) The system according to claim 1, characterized in that the

calculating unit uses earlier calculation results to calculate a probable position, orientation, direction of work and speed a certain time in advance for the working part of the ~~working machine~~tool.

14. (Twice Amended) A method for determining the position of a working part of a tool on a ~~working~~ machine comprising:

measuring both a position and an orientation of a designated place on the ~~working~~ machine spaced away from the working part of the tool and in a fixed coordinate system;

determining a positional relationship of the working part of the tool relative to the designated place in a machine-based coordinate system; and

calculating in the fixed coordinate system, at least one of an instantaneous position of the working part of the tool and an instantaneous orientation of the working part of the tool based upon the measured position and orientation of the designated place ~~of~~on the ~~working~~ machine and the positional relationship of the working part of the tool relative to the designated place on the machine.

15. (Twice Amended) The method according to claim 14, further comprising fixedly placing at least one detector unit and a north-seeking unit on the ~~working~~ machine for instantaneous sensing of the direction of the ~~working~~ machine in relation to north.

16. (Twice Amended) The method according to claim 14, wherein the act of measuring the position of the designated place on the ~~working~~ machine comprises:

utilizing a stationary measuring station placed in the vicinity of the ~~working~~ machine ~~adapted to cooperate with a detector device~~; and

providing at least two detector units placed at the designated place on the ~~working~~ machine arranged in fixed positions relative to the ~~working~~ machine, said at least two detectors arranged to cooperate with the stationary measuring station to give the orientation in space for the designated place on the ~~working~~ machine.

18. (Twice Amended) The method according to claim 14, further comprising:

rotatably mounting at least one controllable optical unit on the ~~working~~ machine;

aligning the optical unit to ~~the~~ a stationary measuring station;

indicating the orientation of the optical unit in relation to the ~~working~~ machine; and

calculating the orientation of the ~~working~~ machine in the fixed coordinate system.

20. (Three Times Amended) The method according to claim 14, characterized in that the measuring of both position and orientation comprises:

providing a geodesic instrument with target-seeking function placed at a distance from the ~~working~~ machine; and

measuring against at least one target on the ~~working~~ machine.

22. (Three Times Amended) The method according to claim 14, characterized by storing a map with desired topography of a region which is to be processed in a calculating device, calculating data for the working part of the tool and presentation thereof as position and angular positions relative to the map on a presentation unit.

23. (Three Times Amended) The method according to claim 14, characterized in that the position and orientation determination is performed comprising a relatively slow determination in order to measure, at time intervals, at least one of the actual position of the ~~working~~ machine and the orientation of the ~~working~~ machine, and a relatively fast determination which reacts to at least one of position and orientation differences relative to earlier determination(s) in order to calculate and update the determination between the said time intervals.

26. (Three Times Amended) The method according to claim 14, characterized by

calculation, with the help of earlier calculation results, of a probable position, orientation, working direction and speed a certain time in advance for the working part of the ~~working machine~~tool.

28. (Amended) The system according to claim 1, wherein:

the position-determining apparatus further comprises a stationary measuring station placed in the vicinity of the ~~working~~ machine, the stationary measuring station operatively configured to determine the position of the ~~working~~ machine in cooperation with the detector equipment; and

the at least one detector equipment comprises at least one movable detector unit movable between ~~positions with~~ determinable positions in relation to the ~~working~~ machine.

31. (Amended) The method according to claim 14, wherein ~~the act of~~ measuring ~~instantaneously~~ the position of the designated place on the ~~working~~ machine comprises:

utilizing a stationary measuring station placed in the vicinity of the ~~working~~ machine, the stationary measuring station configured to ~~adapted to~~ cooperate with a detector device; and

providing at least one movable detector unit movable between positions with determinable positions in relation to the designated place on the ~~working~~ machine.